

# Behavioral Exposures and Adolescent-Onset Physical Aggression

Late (adolescent-onset) **physical aggression** is associated with **contextual and behavioral exposures**.

General Information	
<b>Broad Focus Area</b>	Injury
<b>Background and Justification</b>	<p>Use of physical aggression varies along the life course. Mothers' retrospective reports indicate that many children begin to use physical aggression before the end of their first year of life.<sup>1</sup> The rate of cumulative onset increases thereafter reaching its peak between 18 and 24 months when close to 80% of children are reported to have been physically aggressive. After this peak, the proportion of children using physical aggression appears to decline.<sup>1-3</sup> However, about 29% persist in their aggressive behavior through adolescence, about 3% manifesting very high levels of aggression.<sup>2, 3</sup></p> <p>Although there are various prospective, longitudinal studies documenting physical aggression and violence and their risk factors, most confound physical aggression with verbal or indirect aggression, delinquency, hyperactivity, oppositional behavior, or other disruptive behaviors and have considered this a homogenous group; some are based on relatively small samples; none are based on a representative sample of the U.S.; none have prospectively collected data during pregnancy; few have collected data from birth; few collect data on girls or examine differences among ethnic or racial groups, and none have done so specifically among Latinos; and each assessed only part of the potential risk factors.</p> <p>Two developmental trajectories for antisocial behavior have been proposed: "life-course persistent" and "adolescence-limited" antisocial behavior. Adolescence-limited antisocial behavior was proposed to have little or no childhood behavior problems and their participation in serious antisocial behavior appears to be less severe, less frequent, and limited to adolescence.<sup>4</sup></p>
<b>Prevalence/ Incidence</b>	<p>During adolescence, the prevalence of physical aggression appears to increase again with about one third of high school students reporting being involved in a physical fight (Grunbaum et al., 2002). In fact, 85% of people who become involved in serious violence by age 27 report that their first act occurred between age 12 and 20 (Elliot, 1994).</p> <p>Approximately 4% of children have high levels of physical aggression from infancy to late adolescence (CPA).</p>
<b>Economic Impact</b>	<p>It is estimated that 25% of the tangible costs associated with violent crime in the U.S. is attributable to juveniles.<sup>5</sup> Based on this assumption and a 1996 report estimating the tangible costs of violent crime in the U.S., the estimated annual cost of juvenile violence in 2003 dollars was \$24.3 billion.<sup>6</sup></p>

Exposure Measures		Outcome Measures	
<i>Primary/ Parental</i>		<i>Primary/ Maternal</i>	
Methods		Methods	
Life Stage		Life Stage	

<b>Primary/ Child</b>	Questionnaires measuring parenting and parent characteristics (mental health, personality, behavioral), family characteristics (psychosocial indices: cohesion, chaos, etc.), and environmental risk indices (home, neighborhood).	<b>Primary/ Child</b>	Physical Aggression
Methods	Multiple contacts during the first year of life would be essential to establish parent-child interactions.	Methods	Questionnaire (cognitive, social, behavioral) Direct observation by medical professional
Life Stage	Birth, repeated at year 1 (13-18 months), 2, 3, 4, 5, 10, 15, & 20	Life Stage	Repeated, birth to age 20

Important Confounders/Covariates	
Family factors	Family factors appear to diminish their importance for physical aggression during adolescence; however, poor parent-child relationships, lack of supervision, and low parental involvement, as well as family conflict still appear to have an impact, possibly indirectly by influencing the type of peers chosen by adolescents. <sup>1,3</sup>
Toddler behavior	Toddlers' use of aggression against peers, especially within the family, may be a precursor of serious aggression in later life. <sup>2,3</sup>

Population of Interest	Estimated Effect that is Detectable
All Children	

Other Design Issues	
<b>Ethical/Burden Considerations</b>	A variety of conditions may be encountered and require intervention, including: Child abuse and neglect, unsafe parenting practices, unsafe environments, serious aggression, and other antisocial behavior by the children.
<b>Cost/Complexity of Data Collection</b>	Some development of measures will likely be needed. Multiple contacts during the first year of life would be essential to establish parent-child interactions.

## References:

- <sup>1</sup> Tremblay, R.E., Japel, C., Pérouse, D., Boivan, M., Zoccolillo, M., Montplaisir, J., & McDuff, P. (1999). The search for age of "onset" of physical aggression: Rousseau and Bandura revisited. *Criminal Behaviors & Mental Health* 9, 8-23.
- <sup>2</sup> Hay, D. F., Castle, J., & Davies, L. (2000). Toddlers' use of force against familiar peers: A precursor of serious aggression? *Child Development*, 71, 457-467.
- <sup>3</sup> Nagin, D., & Tremblay, R. E. (1999). Trajectories of boys' physical aggression, opposition, and hyperactivity on the path to physically violent and non violent juvenile delinquency. *Child Development*, 70, 1181-1196.
- <sup>4</sup> Moffitt, T. (1993). Adolescence-Limited and Life-Course Persistent Antisocial Behavior: A developmental taxonomy. *Psychological Review* 100, 674-701.
- <sup>5</sup> Miller TR, Fisher DA, and Cohen MA. 2001. Costs of Juvenile Violence: Policy Implications. *Pediatrics* 107(1): p. e3.
- <sup>6</sup> Miller TR, Cohen MA, Wiersma B. 1996. Victim Costs and Consequences: A New Look. Washington, DC: Government Printing Office; National Institute of Justice Research Report NCJ 155281 and US General Printing Office 495-037/20041.